National Diabetes Education Program (NDEP)
Guiding Principles for Diabetes Care:
For Health Care Providers

Introduction

The goal of the National Diabetes Education Program (NDEP) is to reduce the suffering and death resulting from diabetes and its complications, through programs which increase public and health professional awareness of the seriousness of diabetes and the value of its treatment. These Principles of Diabetes Care describe the essential components of quality diabetes treatment and form the basis of NDEP's public and professional awareness programs. The principles have been developed for people with diabetes, their families, health care providers, as well as those who pay for health care, to define the information and care needed to assure quality diabetes care. They are consistent with the principles recommended in the 1998 "Consumer/ Patient Bill of Rights," developed by the Advisory Commission on Consumer Protection and Quality in the Health Care Industry.

People with diabetes and health care professionals should be in an on-going conversation about what care is best for each individual, and why. To encourage these conversations, the Principles for Diabetes Care outline essential elements of quality treatment, leaving specifics up to the individuals with diabetes, their families, and health care providers. These principles are based upon current research, guidelines, and standards of care.

Persons with diabetes should be encouraged to participate in all aspects of a full and active life, with decisions regarding any limitations being made on an individual basis between a person and his or her health care provider. Proper care and continued management of diabetes can prevent or control diabetes complications. With proper education and careful self-monitoring, people with diabetes should expect to lead long and active lives at work, home, and during leisure time.

Principle 1: Screening High Risk People and Diagnosing Diabetes

One third of people with diabetes remain undiagnosed. Finding and treating diabetes early can improve health outcomes for people with diabetes. Therefore, routine screening and correct diagnosis are essential.

Fasting plasma glucose should be measured periodically as part of routine health screening, particularly in people at high risk for diabetes. High-risk individuals include those who are older, overweight, have a family history of diabetes, have had gestational diabetes, and are of certain ethnic backgrounds. Early identification of diabetes may lessen or prevent the all-too-frequent problem of long-term complications developing before the person has been diagnosed. The diagnosis of diabetes should be clear, based on accepted standards for high blood glucose. Terms such as "a touch of diabetes," "borderline diabetes" or "sugar's a little high" are unnecessary, confusing and unacceptable. There should be no question on the part of the patient or the treating professional whether or not a person has diabetes. Persons with diabetes should also know what type of diabetes they have.

Principle 2: On-Going Care

People with diabetes should always receive high-quality care on an ongoing basis to ensure that they are taking good care of their diabetes, and to make changes to their treatment plan when needed to achieve control of the disease.

The person with diabetes should have on-going care in a supportive, positive environment, without barriers to obtaining care. The health care team must include a provider responsible for on-going care and skilled in its delivery with access to other types of providers that often include physicians with various specialties, a diabetes educator, a nutritionist, and other health care professionals when appropriate. Particular groups

including people of certain ethnic backgrounds, youths, pregnant women, and the elderly each have very special needs that should be addressed. People with diabetes also need support from their family, friends, and co-workers. Financial resources must be available for necessary education, durable equipment, supplies and medicine. Discrimination against employment, licensing, and obtaining insurance must be overcome.

Principle 3: Diabetes Education

People with diabetes and their family members have the right to accurate information and education needed for diabetes self-care.

Health care providers should be responsible for diabetes education addressing the medical and emotional needs of the individual patient. Education enables the person with diabetes to participate more actively in his or her treatment and prevention of complications. Diabetes education is a continuous process. It should begin with the essential elements of self-care and include instruction on the prescribed medical regimen. Over time, the instruction should become a dialogue defining and addressing the needs of the individual and his or her family.

People with diabetes should have the opportunity to acquire the knowledge and skills to enable and empower them to provide self-care for their disease. It is also important to enlist the patient, family members, and others who support the patient in the health care team so as to achieve a greater measure of self-care and quality of life for people with diabetes.

Principle 4: Treating Hyperglycemia

Blood glucose levels should be kept as near to normal levels as is safely possible. The target range should be based on an overall assessment of the person's health.

A primary goal of diabetes treatment is the control of hyperglycemia by a variety of methods. It is well known that hyperglycemia, over many years, causes long-term complications of diabetes. The risk of eye disease (retinopathy), kidney disease (nephropathy) and nerve damage (neuropathy) is strongly linked with too high blood glucose levels. Evidence is growing that the higher risk of hardening of the arteries (heart attacks, circulatory problems, and stroke) in people with diabetes also can be lessened by controlling hyperglycemia.

The treatment methods necessary to control hyperglycemia vary from person to person. In type 1 diabetes, insulin is always required, in combination with a well-defined treatment plan. In some people with type 2 diabetes, a healthy diet and exercise achieves diabetes control, but most will require pills and/or insulin in addition to diet and exercise to control their diabetes. The exact methods of treatment--diet, exercise, oral antidiabetic agents and/or insulin--should be tailored to the individual's needs. People with diabetes should participate in the decision making process, with options and goals clearly stated.

Principle 5: Self-Monitoring of Blood Glucose Control and Hemoglobin A1c (HbA1c)

Blood glucose levels and hemoglobin A1c values should be measured on a routine basis using current, reliable methods.

The absence of symptoms of high blood glucose is an unreliable guide to judge glucose levels since they do not occur until blood glucose reaches dangerous levels. Diabetes is often called a "silent disease" because it can cause serious complications without always having serious symptoms. Routine self-monitoring of blood glucose is the most successful approach in self-management of diabetes because it provides a picture of the immediate blood glucose level. Individual circumstances will define how often self-monitoring is used, the specific approach, and the methods of recording or reporting results. People with diabetes must have access to the tools necessary for self-management, usually including meters and strips.

Hemoglobin A1c (also called glycohemoglobin, glycosylated hemoglobin or glycated hemoglobin) is a test that indicates the average blood glucose over the previous 8-12 weeks. Since most long-term complications

of diabetes are related to hemoglobin A1c, its measurement should be a regular part of assessing diabetes care. Hemoglobin A1c monitoring is essential to assess long-term blood glucose control. People with diabetes should know their own hemoglobin A1c, and whether they are reaching their target goal.

Principle 6: Preventing and Diagnosing Long-term Diabetes Problems

Excellent diabetes care can greatly lower the chances of developing long-term diabetes problems.

The control of blood glucose is one important way to prevent complications. Other important risk factors include smoking, high blood pressure and levels of blood fats above normal (especially high total cholesterol and LDL-cholesterol, or low HDL-cholesterol levels). Routine measurement and management of these risk factors are part of good diabetes care.

Another important way to prevent long-term complications of diabetes is to practice healthy self-care behaviors. A healthy diet and regular use of prescribed medications are basic behaviors needed for diabetes self-care. Regular exercise, foot care, and routine visits to health care providers are examples of other needed behaviors.

Principle 7: Screening For and Treating Long-term Diabetes Problems

People with diabetes should have regular exams to help find and treat long-term diabetes problems. All long-term diabetes problems have effective treatments.

Routine screening for long-term complications can help detect problems at a time when they can be successfully treated and managed. The physical examination and/or laboratory tests can be used to identify early complications. Examples include the dilated eye examination by a competent professional for detection of retinal (eye) complications, the physical examination for detection of nerve damage, and a measurement of protein in the urine to detect kidney disease.

The progression of long-term complications of diabetes can usually be prevented or delayed if they are found and treated at an early stage. The progression of diabetic kidney disease, for example, can be slowed or prevented by controlling high blood pressure and high blood glucose. Severe eye disease can be successfully managed by laser therapy. Circulatory complications in the legs, heart, or brain may be improved by treatments that may or may not need surgery. These examples show the importance of treating long-term complications at any stage of diabetes.